The Impact of Education on a Mental Health Provider's Willingness to Adopt Innovation in the Diagnostic Process

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Abstract

In today's healthcare environment, there is ample evidence to support early identification of disease and implementation of effective treatment to improve patient outcomes. The objectives of this clinical intervention were twofold; the implementation of an innovative change within an organization, allowing for systematic screening through incorporation of the Mood Disorder Questionnaire (MDQ), and evaluation of mental health provider's willingness to incorporate practice change. A pre and post quasi-experimental design evaluated the attitude of providers regarding practice change using the Evidence-Based Practice Attitude Scale and the utilization of the MDQ following educational intervention. Parametric testing was used to explore the relationship between education specific to practice change and the provider's attitude through the use of the paired *t* test. The Chi-square test evaluated the use of the MDQ by clinic healthcare providers in relation to an innovative practice change. Results of this study illustrate enhanced provider willingness to adopt innovation and increased MDQ use following the intervention. Ensuring provider access to screening tools and education during the process of practice change provides a strategy for early intervention enhanced willingness to support practice evolution.

Keywords: MDQ, innovation, provider willingness, EBPAS, practice change

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In today's healthcare environment, there is ample evidence to support early identification of disease and implementation of effective treatment to improve patient outcomes. In order to accomplish this task it is essential that providers have reliable tools available to them in clinical practice that gather psychiatric symptomatology in an efficient manner and willingness to adopt innovation. The objectives of this clinical intervention were twofold; the implementation of an innovative change within an organization, allowing for systematic screening through incorporation of the Mood Disorder Questionnaire (MDQ), and evaluation of mental health provider's willingness to incorporate practice change.

Background and Significance

According to the National Institute of Mental Health statistics (NIMH, 2014), there are an estimated 43.6 million adults in the United States with any mental illness, representing 18.1% of all adults. This data represents nearly 44 million individuals and research completed by the NIMH suggests only half this number receive treatment (NIMH, 2002). Despite the prevalence of psychiatric disorders, many individuals go without treatment due to being undiagnosed or being misdiagnosed (Ali, Teich, & Mutter, 2015). Under-recognition of psychiatric disorders is common and results in substantial delay in diagnosis, subsequent initiation of treatment, and poorer outcomes (Patel et al., 2015).

Challenges in the Clinical Setting: Internal Evidence

In a community mental health clinic in rural Arizona it is evident that the current process of psychiatric evaluation leads to variable results due to differing levels of thoroughness, skill/experience, and documentation of symptomatology. Additionally, information gathered

through random selection retrospective electronic chart review of 100 charts illustrated that collection/documentation of symptomatology is not consistently adequate in regards to diagnostic formulation based on the Diagnostic Statistical Manual (DSM-V) symptom criteria for diagnostic inclusion. This led to misdiagnosis 25% of the time and subsequent introduction of ineffective/inappropriate treatment. Identification of this problem led to consideration of ideas that would allow for a more streamlined and evidence-based process by which information is gathered, so to assure more reliable/valid results in the diagnostic formulation phase of psychiatric treatment. Through direct interview of the administration and clinical staff, it was found that outpatient psychiatric providers feel limited in the ability to fully assess individuals due to short appointment times, delay in follow-up, and complex interviews that interfere with successful information gathering.

Delay in Treatment

Explanations for delay in treatment have been attributed to poor detection of the illness, misdiagnosis, and initiation of inappropriate treatment (Altamura, 2015). To better explain delay in initiation of recommended treatment; Drancourt et al. (2013) propose that delay is often due to insufficient awareness of illness, lack of screening, and implementation of appropriate treatment. Therefore, to reduce the duration of untreated illness they support aggressive strategies to identify disorders including tools to improve diagnostic reliability and instigation of systemic screening (Drancourt et al., 2013). One strategy to improve diagnostic reliability and systemic screening includes the use of screening tools in combination with the traditional interview as they act to facilitate targeted diagnoses, treatment, and provides links to empirical literature (Baer and Blais, 2010).

Psychiatric questionnaires improve diagnostic accuracy with a standardized approach to the collection of pertinent data. The use of screening tools translates into better identification and earlier intervention/treatment, providing building blocks to improve quality of service (Barwick, Boydell, Cunningham, and Ferguson, 2004). The use of screening tools may contribute to routine use of standardized assessment and potentially transform the practice of psychiatry into mainstream medicine, improving the quality of care for all psychiatric patients (Ricci, Calugi, Miniati, and Fagiolini, 2013). This inquiry led to the clinically relevant PICO question, "In patients who present with depression (P), how does using the Mood Disorder Questionnaire in addition to clinical assessment (I) compared to clinical assessment alone (C) affect the diagnostic accuracy of unipolar versus bipolar depression (0)?"

Search Strategy

Evidence pertaining to the clinical question presented above was obtained by performing an extensive search of the following databases: US National Library of Medicine National Institutes of Health (PubMed), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Psychology Information (PsycINFO), and Cochrane Database of Systematic Reviews. Keywords included; *psychiatry, screening, diagnosis, bipolar, mood disorder questionnaire,* and *MDQ*. Exclusion factors included studies published before 2011, those written in a language other than English, protocols, doctoral dissertations, and/or age groups <18 years old. Studies chosen for inclusion included adult patients, those from other countries, pregnancy/postpartum, inpatient and outpatient settings. All of the studies chosen for inclusion were required to be well-documented with conclusive evidence of descriptive statistical data addressing the reliability of the MDQ in evaluating BD disorder. Data was extracted from each

study during the review process and organized in the evidence table for concise analysis (Appendix A).

Evidence Synthesis: Critical Appraisal and Conclusions

Twelve studies were chosen for inclusion in this search for evidence. The levels of evidence in the selected studies ranged from level I through level III, with one meta-analysis, a systemic search, random controlled trials, and cohort studies (Melnyk and Fineout-Overholt, 2015). Conclusions were drawn from the evidence based on critical evaluation of the study populations, settings, and related data analysis (Appendices A & B). The variety of research settings, sample of individuals, diagnostic groups, and structured diagnostic interview styles provided improved generalizability for application of the MDQ as a systematic part of the clinical assessment process.

In conclusion, the main goal of this literature review was to determine if addition of the MDQ in the clinical assessment process affects the diagnostic accuracy of UPD versus BD depression. The reliability and validity of the MDQ in detecting BD is documented throughout these articles, with p values <0.001 and 95% confidence intervals, which illustrate statistical significance and reliability of the MDQ (Appendix A). The most substantial conclusion is that the MDQ is an excellent tool for detecting a recent (hypo)manic episode, screening for BP during both pregnancy and postpartum periods, and in detecting previously unrecognized BP illness when used within a general population sample (without exclusion of BP illness) (Appendices A & B). This information supports the use of the MDQ in a systematic screening endeavor during the process of clinical assessment; providing improved diagnostic accuracy, treatment implementation, and subsequent patient outcomes.

Purpose and Rationale

The purpose of this project is twofold. First, the goal was to implement the use of the MDQ the within diagnostic process as part of an innovative organizational change; thereby improving the identification of BD and resultant patient outcomes. The second purpose of this project was to evaluate mental health provider's willingness to incorporate the use of an evidence-based tool (MDQ) within the diagnostic process. The project outcome allows healthcare providers to have a strategy for early intervention that includes identification of BD specific symptoms through use of the MDQ; ultimately supporting accurate diagnosis and timely implementation of treatment based on established guidelines.

EBP Model and Theoretical Framework

The ACE Star Model of Knowledge Transformation facilitated the practice transformation. This model organizes the concepts of improvement of care, providing a framework to organize evidence-based practice (EBP) processes illustrated in five major stages of knowledge transformation (Stevens, 2004). Stevens (2004) introduces five stages, which include discovery research, evidence summary, translation to guidelines, practice integration, and process/outcome evaluation. Discovery research generates knowledge through inquiry and research methodologies. Evidence summary allows for synthesis of research knowledge into a single meaningful statement that reflects the science. The third step requires translation of the evidence into recommendations for practice. The next step requires practice integration to create a more sustainable system, involving individual and organizational practices. Process and outcome evaluation act as the final step. This stage allows for evaluation of the EBP impact on care outcomes, efficacy and efficiency of the practice change, patient/provider satisfaction, and other various endpoints (Stevens, 2004). This model provided a foundation for sustained practice

change based on evidence-based research, with the intent to enhance patient care through improved diagnostics and treatment implementation.

The diffusion of innovation theory (DOI) provided the theoretical framework necessary to guide this intervention (Rogers, 2003)(Appendix C). This theory offers valuable understanding of the process of change, stressing the need for communication within the adoption process (Kaminski, 2011). Rogers identified five categories of adopters and described their influence on both innovation and adoption of change (Rogers, 2003). Rogers' theory allowed a step-wise guide for adoption of innovation to include the knowledge stage (literature search and provider exposure), persuasion stage (education of providers), decision/evaluation stage (data analysis), implementation stage (intervention implementation), and the confirmation of adoption stage (data analysis and outcome evaluation) (Kaminski, 2011).

Purpose Statement

The evidence gained through extensive literature review supports a systematic change in practice, to include the use of the MDQ during the evaluation of patients presenting for psychiatric care. Although system change is necessary to provide an improved mechanism for data collection and enhanced diagnostic ability, it is imperative that the providers are educated of the importance and routinely utilize the knowledge gained from the questionnaire when formulating diagnoses. In order to evaluate the efficacy of this intervention, outcomes were measured to include systemic use of the MDQ and the provider's attitude toward an evidence-based practice change.

Applying Evidence into Practice: Project Methods

Project implementation required evaluation of the environment, project management, and change management (Moran, Burson, and Conrad, 2014). Initial evaluation of the environment

focused on the setting, the organizational culture, and the stakeholders. Subsequent project intervention focused on the innovative change itself, to include related ethics and participants.

Setting

The setting of this project is an outpatient clinic within a rural mental health organization in Northern Arizona. The organization was incorporated in March of 1966 and has a long and steady history of providing behavioral health services to the local community. The organization consists of a staff of just over 200, a budget of approximately $18 million per year, and provides some 4,000 individuals with over 150,000 behavioral health services annually.

Intervention

This clinical intervention presents an innovative change in healthcare delivery, requiring a 3-phase process for completion. The initial phase of this intervention included implementation of the practice change, which allowed for systematic screening of individuals that presented for psychiatric treatment. Thereby, the MDQ results were available for incorporation in the initial diagnostic formulation and subsequent treatment planning. The second phase of the intervention focused on education of the organization's providers at the beginning of the data collection phase. Learning objectives included recognition of the prevalence of BD, understanding of the diagnostic challenges related to BD, identification of the complications related to delay in initiation of treatment, knowledge of the MDQ, and utilization of rating scales to aid the diagnosis of BD. The third stage of this intervention focused on the evaluation of the provider's willingness to adopt innovation in the diagnostic process, measured by the Evidence Based Practice Attitude Scale (EBPAS).

Ethics: Protection of Human Subjects and Recruitment

In order to assure protection of human subjects during the process of this intervention, Arizona State University International Review Board approval was obtained prior to initiation of the project and the plan was adhered to in full. Recruitment of the participants occurred at the setting described above and during an extension endeavor offered by Health Choice Integrated Care, for which institutional support was granted. In order to protect the participants, random identification numbers were placed on the initial cover letter, pre-, and post-educational session questionnaires. The survey measures were not linked with practitioner identities. No identifying data from the patient's MDQ survey was recorded during this project, as the chart review is only intended to assess whether or not the MDQ was completed following the innovative practice change.

Design

A pre and post quasi-experimental design evaluated the utilization of the MDQ following educational intervention and the attitude of providers regarding practice change using the EBPAS. Evaluation included the use of instruments, data collection, and subsequent analysis using SPSS® version 23 statistical package. Parametric and Nonparametric tests were used to analyze the outcome variables. The critical value was set at $p<0.05$.

Instruments

In order to evaluate the efficacy of this practice change, outcome measurement included the use of the Mood Disorder Questionnaire (MDQ) and the provider's attitude toward an evidence-based practice change. Two instruments were used to measure the outcome variables, the MDQ and the Evidence-Based Practice Attitude Scale (EBPAS).

The Mood Disorder Questionnaire. The MDQ scale is a 15-item self-screening instrument that aids in the diagnosis of bipolar disorder (see Appendix D). The instrument

consists of 3 sections, which include symptom endorsement, symptom clustering, and severity of problem caused (Twiss, Jones, and Anderson, 2008). The first section consists of 13 yes/no statements; the second section consists of one yes/no question specific to the simultaneous occurrence of the symptoms presented; the third section consists of one question concerning the influence of the symptoms. To accurately identify the presence of BD, the suggested standard cutoff score is 7 or more symptoms with simultaneous occurrence and moderate or greater impairment (Wang et al., 2015). The MDQ illustrates a summary sensitivity (.62) and specificity (.85) in detection of BD in psychiatric outpatients with a cutoff score of 7 (Wang et al., 2015; Hirschfeld et al., 2003). Additionally, Lin et al. (2011) found the internal consistency reliability of the tool to be 82% and the context validity index to be 80%.

Evidence-Based Practice Attitude Scale. The EBPAS was developed to evaluate mental healthcare provider's attitudes towards evidence-based practice (see Appendix E). The scale is a 15-item Likert Scale that measures openness to innovation and perceived importance of using research-based innovations in clinical practice (Aarons, 2004). The first 8 questions review the individual's feelings about using new types of interventions, therapy, or treatment. The last 7 questions review the individual's likelihood of adopting innovative treatments if they had received training specific to the intervention. The items are broken down into 4 scales, which include requirements, appeal, openness and divergence (Aarons, 2004). Subscale scores are computed using a mean score for each item set in order to determine the total score. Chronbach's alpha illustrated internal consistency in reliability, ranging from high to moderate (3 items; α=0.93), appeal (4 items; α = 0.74), openness (4 items; α=0.81), divergence (4 items; α=0.66), and EBPAS Total (15-items; α=0.79) (Aarons, 2004).

Data Collection

The MDQ data was collected once 8 weeks after the MDQ practice change was initiated. Data extraction included a retrospective chart review of all new psychiatric evaluations completed within the 8-week period prior to intervention and focused on MDQ use by providers, provider type, and patient's primary diagnosis. Post-intervention data was obtained by reviewing the charts of individuals with psychiatric evaluations completed within the 8-week period subsequent to the intervention. The collection process was identical for audit of pre and post-intervention data.

Psychiatric providers were asked to complete the EBPAS prior to the educational session, which included demographic questions. Participants then spent 30 minutes in the educational intervention prior to completing the post-education EBPAS. The EBPAS allowed for evaluation of the provider's attitude toward the practice change both before and after a 30-minute educational session regarding use of the MDQ. The educational session was conducted during the medical staff meeting for all staff. Evaluation of EBPAS results illustrated the effectiveness of education when implementing innovative change.

Chart Audit. Chart audit provides a tool for quality improvement that illustrates purpose in required measurements, administrative requirements, research, and quality improvement (Quality improvement, 2017). Research applications include audits to determine prevalence of conditions by taking a snapshot sample to evaluate if processes are being followed (University Hospitals Bristol, 2017).

Data Analysis

The SPSS® version 23 statistical package was used to analyze the data. Descriptive statistics were used to describe the sample and outcome variables. A chi-square test was conducted to test the use of the MDQ in relation to the innovative practice change. A chi-square

evaluates whether or not two variables are independent of each other (Cronk, 2014). A paired t-test was used test the provider's willingness to adopt innovation in practice in relationship to education. A paired t-test is a parametric test that allows the comparison of two scores (Keller and Kelvin, 2014). The critical value was set at $p<0.05$.

Project Results

The plan for statistical analysis included evaluation of three specific data sets; provider demographics, the use of the MDQ pre- and post-implementation of the practice change, and evaluation of the EBPAS pre-and post-educational intervention.

Descriptive statistics were used to evaluate the sample (n=29), that included 8 psychiatric providers in a rural mental healthcare organization and 21 additional participants from the extension opportunity. The sample (n=29) consisted of 10 (34.5%) psychiatrists, 18 (62.1%) nurse practitioners (NPs), and 1 (3.4%) physician's assistant (PA). The ages were categorized into 4 age groups: 18-34 (n=1, 3.4%), 34-54 (n=13, 44.8%), 55-74 (n=11, 37.9%), and 75+ years (n=4, 13.8%). Years of experience in the psychiatric field were 6-10(n=5, 17.2%), 11-15 (n=9, 31.0%), 16-20 (n=7, 24.1%), 21-25 (n=2, 6.9%), and 26+ (n=6, 20.7%). The providers were asked if they had previously used psychiatric screening questionnaires. Twenty-six (89.7%) of the responders answered yes; however, a greater percentage had utilized screening questionnaires, 19 (65.5%) had not used the MDQ in practice. The reasons provided were the following: the tool was not available (n=12, 44.4%), takes too much time (n=4, 13.8%), or other (n=3, 10.3%).

The chart audit consisted of 300 chart reviews; including all new psychiatric evaluations within the 8 weeks before and after the intervention. The average age of patients was 31.80 (SD=19.30) years, 207 (69%) of which were adults and 93 (31%) child or adolescent. Appraisal of all new psychiatric evaluations (n=181) completed within the 8 weeks prior to systemic

screening implementation illustrated that the MDQ was used in 27 (14.9%) of all evaluations. The evaluations were completed by differing provider specialties, to include 2 (1.1%) PAs, 148 (81.8%) by NPs, and 31 (17.1%) by psychiatrists. The MDQ was not used by the Pas; however, it was used in 21 out of 127 (16.5%) evaluations by NPs, and 6 out of 25 (24%) by physicians. The chart audits (n=119) following implementation of systematic screening illustrated that the MDQ was used in 94 (79%) of the evaluations. Eleven (9.2%) MDQ evaluations were completed by physicians and 108 (90.8%) were competed by NPs, illustrating improved MDQ use by NPs (78.7%) and physicians (90.9%). A chi-square test of independence was calculated comparing the results of MDQ use pre and post-intervention. No significant relationship was found ($\chi^2(1) = .575$, $p < .001$). Pre and post-intervention MDQ use appear to be independent events, indicating that there is not significant dependence of one variable upon the other (Cronk, 2014).

A paired *t* test was used to evaluate the provider's attitude towards willingness to adopt innovation. Analysis compared the average pre and posttest EBPAS domain scores for requirement, appeal, openness, and divergence (See Table 1). A paired-samples t test was calculated to compare the mean pre-intervention scores to the mean post-intervention scores. The mean on the pre-intervention was 40.69 (sd=8.05), and the mean on the post-intervention was 41.17 (sd=7.57). A significant increase from pretest to posttest was found ($t(28)=-1.09$), $p<.001$). This demonstrates that education regarding practice change significantly affects provider's willingness to adopt innovation in the practice setting.

Table 1

Pre and Posttest EBPAS Scores

	Pre				Post			
EBPAS Scale	n	M(SD)	min	max	n	M(SD)	min	max
Requirement	29	7.10(4.09)	.00	12.0	29	6.86(4.18)	.00	12.0
Appeal	29	12.00(2.60)	6.0	16.0	29	12.38(2.53)	6.0	16.0
Openness	29	10.48(3.46)	1.0	15.0	29	11.24(2.77)	3.0	16.0
Divergence	29	11.10(2.98)	4.0	16.0	29	10.69(2.61)	4.0	16.0

Discussion

This project offers value through both insights and consequences of evidence-based practice evolution. Firstly, through the process of a strategic change, innovation can occur within the practice setting. This sets the stage for improved patient outcomes through systemic screening; ultimately allowing for identification of disorders and more timely treatment implementation. Secondly, this project brings about awareness of the importance of provider participation in innovative change. The implications of this project are potentially limitless, as it indicates that team involvement and education have the potential to enhance the process of innovation.

Limitations

This study has several important limitations. The design is a simple pre-post design that includes a small sample size. This reduces generalizability and the strength of statistical analysis available for use in data evaluation. Another limitation is present within the systemic screening endeavor, as paper questionnaires were used. This left room for human error, in that they were not given to every patient, nor uploaded to the electronic health record in all cases. Additionally, this study does not address the knowledge gained from MDQ use or impact on patient outcomes. Future research recommendations include use of larger sample sizes and electronic measures to assure more consistency in strategic enactment of change, as well as the impact on patient outcomes.

Sustainability

The complex healthcare environment requires evidence-based approaches to care delivery, alongside interprofessional collaboration, to assure process sustainment (White, Pillay, and Huang, 2016). In order to assure sustainability of this intervention, recommendations include

incorporating the use of the MDQ in the electronic medical record, regular auditing of use in the diagnostic process, and ongoing educational endeavors to support improved collaboration between the evidence and clinical practice.

Summary

The practice environment is complex and providers face numerous challenges in providing care to patients in an efficient manner. This paper illustrates the need for healthcare providers to have a strategy for early intervention that includes identification of bipolar specific symptoms through use of the MDQ; ultimately supporting accurate diagnosis and timely implementation of treatment based on established guidelines. Additionally, innovation in practice is necessary in order to implement best practice findings in a timely fashion. Through incorporation of provider education and engagement there is enhanced willingness to adopt innovation in the practice setting. This supports improved patient and system-specific outcomes. The combined efforts of this innovative practice change have a foundation of evidence-based literature subsequently guided by outcome measurement, which acts to ultimately enhance provider efficiency and efficacy in the diagnostic process and improve patient outcomes.

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Zimmerman, M., Galione, J., Chelminski, I., Young, D., Dalrymple, K. (2011). Psychiatric diagnoses in patients who screen positive on the Mood Disorder Questionnaire: Implications for using the scale as a case-finding instrument for bipolar disorder. *Psychiatry Research,185(3),* 444–449.

Appendix A

Evaluation Table

Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
Wang, H. R. (2015). The validity of the mood disorder questionnaire for screening bipolar disorder: A meta-analysis. Population: Worldwide, with evaluation of Eastern versus Western countries Funding: Nothing to declare Bias: None reported LOE: I	None Stated, Constructivist Theory implied.	Design: Comprehensive literature search using multiple databases. Method of the Cochran Diagnostic Test Accuracy Working group for Meta-analysis. Bivariate random effects model. Purpose: To calculate the summary sensitivity and specificity, determining the diagnostic accuracy of the MDQ. Inclusion Criteria: studies provided data regarding diagnostic accuracy of the MDQ for screening BP, DSM or ICD was used	n = 21 studies IP and OP 1,346 articles reviewed for inclusion. 1,276 excluded (didn't meet criteria), 4 were poster abstracts, 4 did not provide information regarding diagnostic accuracy of the MDQ and one was a review article 7 studies excluded patients with prior DX of BP. 14 included both patients with MDD and BP. 20 studies -MDQ standard cutoff score 7.	IV1: Ψ Eval IV2: MDQ DVI: Ψ DG/ A DV2: MDQ Score/DX A	QUADAS 2 MDQ with standard and modified cutoff score. Diagnostic accuracy of the MDQ evaluated via analysis of HSROC	Cochrane Diagnostic Test Accuracy Working Group. Calculation of summary sensitivity, summary specificity, and pooled DORs. Subgroup analyses evaluating impact on diagnostic accuracy. Bivariate Random Effects Model Pooled DORs using STATA	No significant differences in diagnostic accuracy between countries. At cutoff of 7, summary sensitivity was low and heterogeneity was high. Studies excluding PTS with BP reduced SN to 0.37 (95% CI), with SP of 0.88. Studies with MDD and BD SN=0.76 and	Clinicians may consider modifying the cutoff to improve sensitivity of the MDQ. Consider various population characteristics.

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
		as the standard reference diagnostic method, and published in peer-reviewed journal. Exclusion Criteria: PTS without mood disorders were participants, studies were conducted in general population samples, or studies were written in languages other than English.	Western Countries=11, Eastern=10. All studies based on DSM-IV or DSM-IV-TR				SP=0.81 Applying optimal cutoff at 7, SN=0.78, SP=0.76 Low SN and SP explained by lowering of the prevalence through extraction of BD cases and remaining cases that were more difficult to diagnose.	
Frey, B. N. (2012). Sensitivity and specificity of the mood disorder questionnaire as a screening tool for bipolar disorder during pregnancy and the postpartum period. Population: PG or PP women referred to a women's mental health OP	None Stated. Donabedian Model inferred.	Design: Cross-sectional psychometric study. Consecutive. Purpose: to investigate the use of the MDQ as a screening tool for BP in a community-based population of PG and PP women.	N= 150 (PG N-95, PP N-55) Age range= 17-43 Mean 30.1 SD=5.5 MS- S(26%), CL	IV1-Ψ EVAL DV1- Ψ DX A DV2- MDQ score/ DX A	MDQ SN and SP analysis. Psychometric data interpreted according to the criteria: >0.80=excellent/highly correlated, 0.80-0.70= good/adequate	SN, SP, PPV, NPV, and chance-corrected level of agreement were obtained using statistical package R, version 2.13.1	Standard cutoff score of 7: SN=0.39, SP=0.91, 95% CI Modified cutoff at 8: SN=0.87, SP=0.85, 95% CI	Using alternative scoring algorithm makes the MDQ an excellent tool beneficial in screening for BP during both PG and PP periods. Prevalence of gestational diabetes

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
program in Ontario. Funding: Supported in part by the Father Sean O'Sullivan Research Award. Bias: No financial relationships relevant to the subject of this article. LOE:III		Inclusion Criteria: Women who were PG or PP Exclusion Criteria: All other populations.	(13.3%), MA (58%) ED- HS (16.7%), CD (27.3), UN (26.7) ΨDX- MDD (50.7%), AX (17.3%), BP (12%), ADJ (9.3%), SUB (3.3%), PSYCH (2%)		correlation, 0.69-0.50= fair/fair correlation, <0.50=poor/poor correlation			(2-6%) is similar to bipolar disorder (4%), yet providers fail to regularly screen for BP.
Boschloo, L. (2013). The mood disorder questionnaire (MDQ) for detecting (hypo)manic episodes: Its validity and impact of recall bias. Population: Adult patient recruited from various sites, Netherlands. Funding: The study was supported by participating universities and mental health care organizations Bias: Authors have	None Stated. Donabedian Model inferred.	Design: Longitudinal research design, Intervention study. Purpose: to examine the validity of the MDQ in detecting hypomanic episode and explore the impact of recall bias. Inclusion Criteria:PTS with DEP or AX DX or referred without DX.	Sample: data derived from the NESDA. N=2981 With DP DX= 2329 (78%) Without DP DX= 652 (22%) Recruited from the community (19%), Primary care (54%), and OP MH (27%) Recruited	IV1-Ψ EVAL DV1- Ψ DX A DV2- MDQ score A	Presence of (hypo)mania measured with CIDI MDQ, with standard cutoff at 7	Conducted using SPSS version 20.0 Internal consistency expressed in Cronbach's alpha: substantial (0.81-1.00), moderate (0.61-0.80), fair (0.41-0.60), slight (0.11-0.40) and virtually no	Reliability: internal consistency 0.84, cronbachs alpha 0.85. Validity: AUC=0.83, 95% CI, p<0.001, SN=0.85, SP=0.65 Standard cutoff ≥7 showed to be optimal with SN=0.83 and	The validity of the MDQ for detecting a recent (hypo)manic episode was excellent. Standard cutoff point ≥7 appeared optimal. With good SN and SP. However, there was poor performance for lifetime episodes.

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
received speaking fees and unrestricted grants from pharmaceutical companies and NOHRD. LOE:II		Exclusion Criteria: PTS with primary BP DX, insufficient command of the Dutch language, incomplete EVAL, incomplete MDQ data, OCD, SUB, PSYCH, or ORG.	Consecutively			(0.00-0.10) Performance of MDQ in detecting lifetime hypomanic episode examined by processing a ROC curve.	SP=0.82	
Gan, Z. (2012). Validation of the Chinese version of the mood disorder questionnaire for screening bipolar disorder among patient with a current depressive episode. Population: patients treated in the psychiatry department, the 3rd Affiliated Hospital of Sun Yat-sen University. Funding: Natural Science Foundation of Guangdong Province, China.	None Stated. Donabedian Model inferred.	Design: Controlled Trial- Intervention study Purpose: Evaluate the validity of the Chinese version of the MDQ in screening BP in PTS with current MDE. Inclusion Criteria: Eligible subjects were treated concurrently for MDE in the psychiatric department, who provided informed	N- 142 consecutive PTS INP=102 (71.8%), OP= 40 (28.2%) 122 completed the 1 YR FU. BPI Group: AA=28±8.7, OA=25.4±8.2, DOI=42.1±34.4, F=5(25%), AF=6(30%) BPII Group: AA=29.2±8.6,	IV1-SCID-1 IV2-MDQ DV1- Initial Ψ DX DV2- Final Ψ DX/ A DV3-MDQ score/ DX A	Instrument use of SCID-I MDQ	Statistical analysis using SPSS 13.0 Mann-Whitney U and Chi-square test. Cronbach alpha used to access internal consistency. ROC curve plotted for screening performance. Optimal cutoff was determined	MDQ showed good accuracy with BP, even with cutoff of 4. SN=0.72, SP=0.73 Cronbach coefficient for the MDQ= 0.735 BP AUC=0.803, p<0.001, BPI AUC=0.826,	MDQ is more sensitive in detecting BPI versus BPII. MDQ (even without section 2 and 3) is a valid tool for BPII and previously unrecognized BPI.

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Bias: Authors report no competing interests LOE:III		consent. Exclusion Criteria: PTS who declined or with a Ψ or physical DO that prevented them from being interviewed or undermined their ability to provide accurate information and those refused to provide IC.	OA=25.7±9.3, DOI=51.8±61.3, F=27(54%), AF=8 (16%) UPD Group: AA=33.6±10.5, OA=31.2±10.9, DOI=30.8±33.0, F=29(55.8%), AF=6(11.5%)			by maxing the Youden's index(=SN+SP-1)	p<0.001 BPII AUC=0.794, p<0.001 ROC analysis illustrated improved cutoff at 4 and 5, illustrating far improved SP and SN	
Poon, Y. (2011). The use of the mood disorder questionnaires, hypomanic checklist-32 and clinical predictors for screening previously unrecognized bipolar disorder in a general psychiatry setting. Population: General psychiatric setting in Hong Kong Funding: Not reported	None Stated. Donabedian Model inferred.	Design: Randomized controlled trial. Purpose: examine clinical predictors of BP an determine the best approach for screening previously unrecognized BP in the general population. Inclusion Criteria: ethnic Chinese, aged 18-64, no previous DX of BP, PSYCH, MR, Dementia and AG.	N=340 AA=50,Range 18-64 F=66.8%m M=23.2% 2/3 MA 65% =secondary ED status or + AA illness onset= 37.5 (range 10-62) FHX- 20% MDE/MDD and 7.9%	IV1-BP FHX IV2-AOI <21 DV1- Ψ DX A DV2- MDQ score/ DX A	MDQ HCL-32 SCID	SPSS version 15.0. Multivariable logistic regression. Categorical variables analyzed by chi-square or Fisher's exact text. P<0.05	MDQ SN=0.65, SP=0.77,PPV= 0.24, NPR=0.95 BP FHX SN=0.23, SP=0.93, PPV=0.28, NPV=0.91 MDQ and BP FHX SN=0.71, SP=0.72, PPV=0.22, NPV=0.96	MDQ is a valid and reliable screening instrument for previously unrecognized BP. Optimal cutoff was 4+ symptoms.

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Bias: Not reported LOE:II		Exclusion Criteria:Those that did not meet inclusion criteria.	BP			Internal consistency of the MDQ determined with Cronbach's alpha.	Internal consistency of 0.75	
Lin, C. (2011). Reliability and validity of the Chinese version of the mood disorder questionnaire. Population: PTS receiving OP services in a medical center in Taiwan. Funding: Not Reported Bias:Not reported LOE:II	None Stated. Donabedian Model inferred.	Design: Intervention study. Measures included Personal information questionnaire, MINI, and MDQ-C Purpose: to extend previous studies by examining the psychometric properties of the MDQ, helping professionals to identify BP in CP. Inclusion Criteria: (a)adult PTS, (b) DG with a mood disorder according to the DSM, including Depressive DO and BP, (c) able to follow instructions for	N=170 AA= 38.94 (±13.77). F=97 (57.06%) M=73 (42.94%) Education: HS-88.22% Diagnosis based on MINI: BP I-67(39.41%) BPII-25 (14.71%) BPNOS-3 (1.76%) MDD- 75 (44.12%)	IV1-Ψ MINI IV2-MDQ-C DV1- Ψ DX A DV2- MDQ score/ DX A	Personal information Questionnaire (gender, FHX, occupation, age). MINI MDQ	Cronbach's alpha to determine reliability. Bartlett's test of sphericity and Kaiser-Meyer-Olkin measure of sampling adequacy	Internal consistency reliability= .82 Context Validity index 80% Youden index Cutoff 6: SN=0.85, SP=0.87 Cutoff 7: SN=0.75, SP=0.93 Cutoff 8: SN=0.53, SP=0.99 Optimal cutoff	Psychometric property analysis illustrated optimal cutoff of 6, noting that 85% of patients with BP will screen positive and 87% without would be ruled out. Cross-cultural consistency with good reliability, validity, SN and SP. Able to discriminate BP from the general population. Concludes improved ability for nursing staff to screen, identifying mood

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		answering the Q. Exclusion Criteria: Those that did not meet inclusion criteria or complete the screening process.					6 with AUC=0.86	disorders in clinical practice and potentially reduce the rate of suicide and improved QOL.
Lee, D. (2013). Usefulness of the combined application of the mood disorder questionnaire and the bipolar spectrum diagnostic scale in screening for bipolar disorder. Population: Korea, psychiatric IP and OP settings Funding: None reported Bias: No bias reported. LOE:II	None Stated. Donabedian Model inferred.	Design: Controlled trial (intervention study). MDQ and BSDS, with 1 year FU. Purpose: examine whether combined application of the MDQ and BSDS is more effective than either tool in screening for BP. Inclusion Criteria: Age 18-65, current MDE Exclusion Criteria: Patients with MR, DEM, PSYCH, severe agitation, severe MED & ORG.	Setting: Gyeongsang National University Hospital between 3/2009 and 3/2011. Sample of IPS and OPS experiencing a current MDE. N=131 Group 1: BP (N=81, AA=35.5 ±11.9 years) Group 2:MDD (N=32, AA=41.4± 10.6 years) No significant differences found in terms of sex, LOE, or	IV1- MDQ IV2-BSDS IV3—Ψ EVAL DV1- Ψ DX A DV2- MDQ score/ DX A DV3- BSDS score/ DX A	MDQ BSDS	T-tests for continuous data and chi-square tests for categorical data Two-tailed p-value<0.05 SPSS version 12.0	Cutoff 6: SN=0.741, SP=0.844, PPV=.923,NPV =.563 Cutoff 7: SN=0.605, SP=0.873 DG Specific: BPI SN=1.00, SP0.844 BPII SN=.643, SP=.465 BPNOS SN=.739,	Increased use in primary care and Ψ clinics recommended. Cutoff of 6=best SN and SP MDQ more effective for BPI than BPII Combination of MDQ and BSDS is more effective than either alone.

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
			MS.				SP=.467	
Rybakowski, J. K. (2012). Use of the hypomania checklist-32 and the mood disorder questionnaire for detecting bipolarity in 1,051 patients with major depressive disorder. Population: Poland Funding: Supported by a grant provided by Sanofi-Aventis Poland Bias: Authors declare no conflict of interest. LOE:II	None Stated. Donabedian Model inferred.	Design: All Poland Multi-Center Intervention study Purpose: to use the HCL-32 and the MDQ for detecting bipolarity in depressed patients Inclusion Criteria: diagnosis of MDE or MDD (current or past) and 18 years or older. Exclusion Criteria: diagnosis of dysthymia, BPI, BPII, HAM Score over 17, treatment with mood-stabilizing drugs, MR, SUB, or severe MED.	Sample: 150 OP clinics, representing 16 regions of Poland. N=1,051 F=752 M=299 Age=18-77 HCL-32 score=10.3± 8.0,37.5% reached cutoff for BP MDQ Score 3.6 ±3.2, 20% reached cutoff for BP	IV1- MDQ IV2-HCL-32 IV3—Ψ EVAL IV4-HAM DV1- MDQ Score/ DX A DV2- HCL-32 Score/ DX A	Ψ EVAL by trained psychiatrist MDQ HCL-32 HAM	STATA Statistical Software Chi2 test, Kruskal-Wallis. Two-sided with significance at 5%.	Mean MDQ score=3.6±3.2 (mean± SD). Mean HCL-32 10.3±8.0 (mean± SD) Spearman correlation coefficient=0.77 (p<0.001) F:0.75, M:0.81 PTS TR with AD drugs in MDQ+ and MDQ- =26.4% and 12.4%	Large group of depressed patients evaluated with scales. More than 1/3 met BP criteria. Corroborates an association between refractoriness of depression to treatment with AD drugs and indices of bipolarity found by other researchers.
Kung, S. (2015). Screening for bipolar disorders: Clinical utilization of the mood disorders questionnaire on an	None Stated. Donabedian Model inferred.	Design: Controlled trial-intervention study. Purpose: Evaluate the	N= 860 (1330 -284 for incomplete MDQ -135 for recurrent admission-51 for other	IV1-Ψ EVAL IV2-MDQ	SCID MDQ	JMP 10.0	Cutoff 6: SN=0.949, SP=0.561 Cutoff 7:	Clinical utilization of the MDQ as a screening instrument on the IP unit.

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
inpatient mood disorders unit. Population: Inpatient mood disorder clinic Mayo, Rochester, MN, USA Funding: Not Reported Bias: authors declare that they have no competing interests. LOE:III		MDQ in an IP setting for clinical validation. Inclusion Criteria: PTS with a DC DG of UPD, MDD, DD NOS, DYS, or BP were included. Exclusion Criteria: Non-primary mood disorder were excluded.	diagnosis) 464 (54%)= Concurrence of symptoms and at least moderate severity 234 + screens with cutoff of 7 200 + screens with cutoff score of 8.	DV1- Ψ DX DV2- MDQ score/ DX A			SN=0.924, SP=0.639 Cutoff 8: SN=0.856, SP=0.714,	Outcomes suggest optimal OP MDQ cutoff of 7 and IP cutoff of 8. Purpose of a screening instrument is to alert and does not obviate the need for a thorough history and confirmatory steps of a diagnosis.
Rucci, P. (2013). A review of self-report and interview-based instruments to assess mania and hypomania symptoms. Population: Adult MH Italy Funding: Not reported. Bias: Not reported	None Stated.	Design/Method: Systematic search strategy devised and queried on Medline from 1973-2012. Purpose: overview of the self-report and interview-based instruments to assess mania/hypomania symptoms and related features. Focus on psychometric	Sample: 43 Studies describing 31 instruments, 17 self-report and 14 interview-based.	IV1-Ψ instrument DV1- internal consistency DV2- validity DV3-factor analysis DV4-inter-rater reliability	Self-report questionnaires (MDQ,HCL-32,BSDS,Mood Spectrum). Interview-based instruments (YMRS, BRMAS)	Factor analysis and latent structure analysis (Rasch analysis). Search terms: mania, hypomania, bipolar spectrum, mood spectrum, instrument, rating scale, questionnaire,	MDQ SN=0.61, SP=0.87, PPV=0.58, NPV=0.88 Cutoff of 6 provided the best balance of SN=0.76 and SP=0.86	Increasing the use of self-report instruments to screen BP in high-risk PTS presenting with depression may contribute to increasing the use of routine standardized assessment. Self-rating scales have an advantage of being able to assess the PTS internal

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
LOE:I		properties, pros/cons. Inclusion Criteria: published in a peer-reviewed book or journal in English. Exclusion Criteria: Did not meet inclusion criteria.				interview and validity, reliability, psychometric properties		states and avoid clinician misinterpretation.
Leao, I. (2012). Cross validation with the mood disorder questionnaire (MDQ) of an instrument for the detection of hypomania in brazil:the 32 item hypomania symptom check-list, first revision (Hcl-32-R1). Population: Psychiatric patient in Brazil Funding: None. Bias: Leao has no conflict of interest. Del Porto is a member of the international board of Lundbeck and a speaker	None Stated. Donabedian Model inferred	Design: RCT. Random selection. Purpose: Evaluation of scales to improve and simplify identification of BP Inclusion Criteria: adults, written consent. Exclusion Criteria: Those with schizophrenia and severe organic diseases.	Setting: Psychiatric Outpatient. N=200 F=80% M=20% AA=44 (16-73) BP spectrum=59.5%, cyclothymia=39%	IV1- MDQ IV2-HCL-32-R1 IV3—Ψ EVAL(SCID-CV) DV1- MDQ Score/ DX A DV2- HCL-32-R1 Score/ DX A DV3-Ψ DG	HCL-32 MDQ SCID	Internal consistency evaluation using Cronbach's alpha. Mann Whitney test and t-test. Varimax rotation was used to identify the factor structure of the MDQ scree test.	MDQ SN=0.68, SP=0.63, AUC=0.723 MDQ reproducibility is 0.69 MDQ 1st administration =0.761 Cronbach's alpha 2nd administration= 0.782	Questionnaires represent a potential improvement in the clinicians' ability to detect and correctly treat bipolar disorder.

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Citation	Conceptual Framework	Design/Method	Sample/Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Decision for Use in Practice/ Application to Practice
for pharmaceuticals LOE:II								
Dodd, S. (2009). Reliability of the mood disorder questionnaire: comparison with the structured clinical interview for the DSM-IV-TR in a population sample. Population: Women included in a large epidemiological study in Australia. Funding:Not reported Bias:None reported LOE:II	None Stated.	Design: RCT. Intervention study. Purpose: Investigate reliability of the MDQ Inclusion Criteria: age 21-94, women, written consent Exclusion Criteria: lack of participation in the clinical interview or MDQ scale, inability to provide consent, death, inability to be contacted.	Initial Sample: N=1494 women AA=54 years (21-94) FU Sample (10 yrs): N=1066 AA=51(34-66) Education: primary 41 (3.8%), part secondary 444 (41.7%), secondary 271 (25.4%) Psychotropic use: 150 (14.1%) Smoking: 150 (14.1%)	IV1-Ψ EVAL/ (SCID-I) IV2-MDQ DV1- Ψ DX DV2- MDQ score/ DX A	Status assessed with the SCID-I MDQ SEIFA index score	Minitab version 15. Manual 2x2 table of association.	MDQ SN=0.25, SP=0.99, PPV=0.28, NPV=0.98, Kappa=0.25	Results for the MDQ SN and SP vary greatly depending on PT population. Reliable screening tools to detect BP in clinical and community populations are of overt value and the development of novel tools and refinement of existing instruments is warranted.

Ψ –Psychiatric, A-Accuracy, AA- Average Age, ADJ-Adjustment Disorder, AF-Atypical Features, AOI- Age of Onset of Illness, AUC- Area Under the Curve, AX-Anxiety Disorder, BP- Bipolar Disorder, BPI- Bipolar I Disorder, BPII- Bipolar II Disorder, BPNOS- Bipolar Disorder Not Otherwise Specified, - BSDS- Bipolar Spectrum Diagnostic Scale, CD- College Degree 2 year, CI-Confidence Interval, CIDI-Composite International Diagnostic Interview, CL-Common Law, CP-Clinical Practice, DC-Discharge, DD NOS-Depressive Disorder Not Otherwise Specified, DEP-Depression, DEM-Dementia, DO-Disorder, DOI- Duration of Illness in Months, DOR-Diagnostic Odds Ratios, DV1-Dependent Variable 1, DV2-Dependent Variable 2, DX- Diagnosis, DYS-Dysthymia, ED-Education, EVAL-Evaluation, F-Female, FHX-Family History, FU-Follow Up, HAM- Hamilton Depression Rating Scale, HCL-32- Hypomania Checklist-32, HS- High School, HSROC-Hierarchical Summary Receiver Operating Characteristics, IC-Informed Consent, IP- Inpatient, IV1-Independent Variable 1,IV2- Independent Variable 2, LOE-Level of Evidence, LOED-Level of Education, M- Male, MA-Married, MDD- Major Depressive Disorder, MDE-Major Depressive Episode, MDQ- Mood Disorder Questionnaire, MDQ-C- Mood Disorder Questionnaire Chinese Version, MED-Medical Disorder, MH-Mental Health, MINI- Mini Neuropsychological Interview, MR- Mental Retardation, MS-Marital Status, N-Number, NESDA-Netherlands Study of Depression and Anxiety, NOHRD- Netherlands Organization for Health Research and Development, NPV-Negative Predictive Value, OA-Onset Age, OCD-Obsessive Compulsive Disorder, ORG-Organic Disorder, OP-Outpatient, PG-Pregnant, PP- Postpartum,,PPV-Positive Predictive Value, PSYCH- Psychotic Disorder, PTS-Patients, Q-Questionnaire, QOL-Quality of Life, QUADAS 2- Quality Assessment of Diagnostic Accuracy Studies-2, ROC- Receiver Operating Characteristic, S- Single, SCID- Standard Clinical Interview for DSM Disorders,SD-Standard Deviation, SEIFA- Socio-Economic Index for Areas, SN- Sensitivity, SP- Specificity, SSPS- Statistical Package for the Social Sciences, SUB- Substance Disorder, TR-Treatment Resistant,UN- University Degree, UPD-Unipolar Depression, YR-Year

Appendix B

Synthesis Table: MDQ Screening for Bipolar Disorder

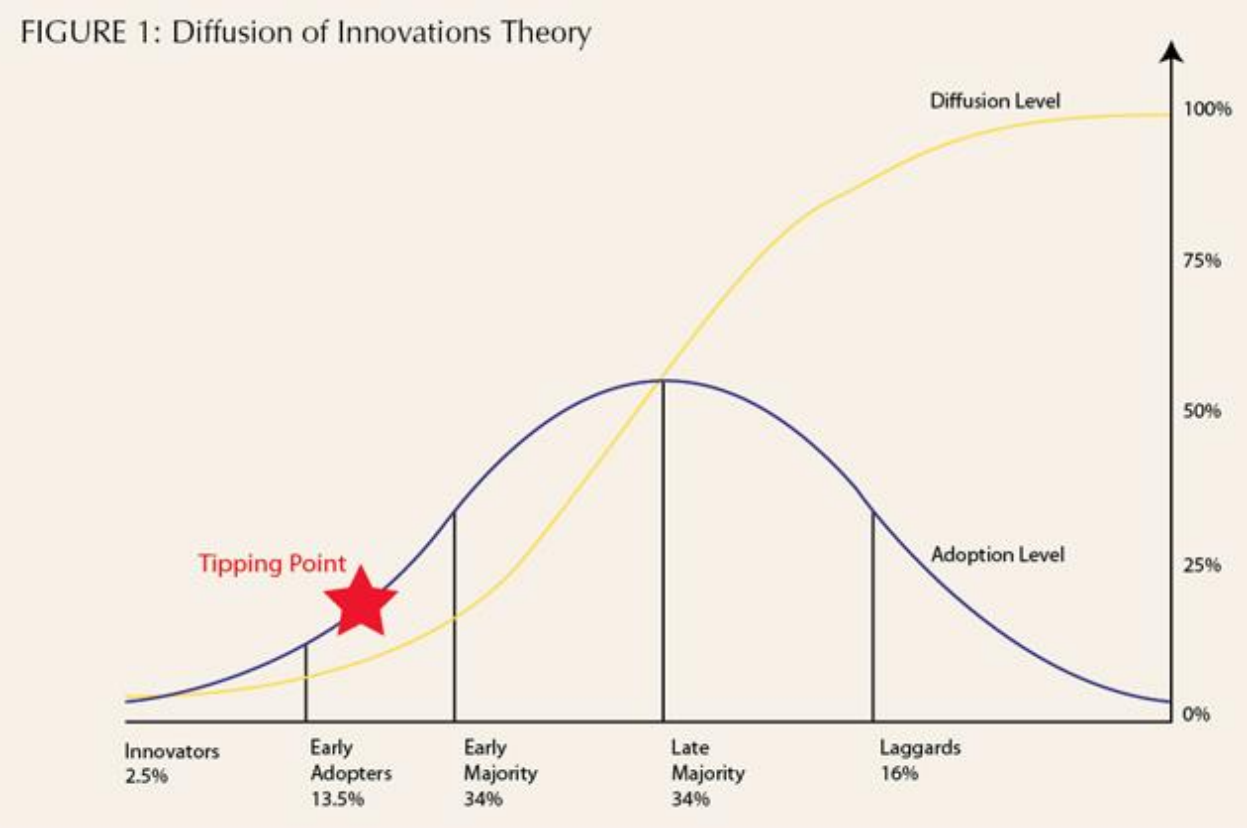
Author	Wang	Frey	Boschloo	Gan	Poon	Lin	Lee	Rybakowski	Kung	Ricci	Leao	Dodd
Study Characteristics												
Year	2015	2012	2013	2012	2011	2011	2013	2012	2015	2013	2012	2009
LOE	I	III	II	III	II	II	II	II	III	I	II	II
Country	World-wide	Canada	Nether-lands	China	China	Taiwan	Korea	Poland	USA	Italy	Brazil	Australia
Setting	IP/OP	OP	OP	IP	OP	OP	IP/OP	OP	IP	IP/OP	OP	OP
Population Demographics												
Sample												
N	NR (21 S)	150	2087	142	305	170	113	1051	133	SR	200	1066
Mean Age	NR	30.1	44.7	28.6	50.0	38.94	38.2	18.7	40.7	SR	44.0	54.0
Female Gender(%)	NR	100	66.6	45.7	66.9	57.06	66.2	71.3	65.6	SR	59.5	100
BP Excluded	X (7 S)				X						X	
BP Included	X (14 S)	X	X	X		X	X	X	X	X		X
Independent Variables												
SCID/ Ψ EVAL			X	X					X		X	X

Ψ EVAL- Psychiatric Evaluation, AOI- Age of Onset of Illness, BP- Bipolar, BSDS- Bipolar Spectrum Diagnostic Scale, CIDI-Composite International Diagnostic Interview, FHX-Family History, GP- General Practice, HAM-Hamilton Rating Scale, HCL-32-Hypomania Checklist-32, IP- Inpatient, LOE- Level of Evidence, MA-Meta Analysis, MDQ- Mood Disorder Questionnaire, N- Number,NR- Not Reported, OP- Outpatient, S- Studies, SCID- Structured Clinical Interview for the DSM-IV, SN- Sensitivity, SP-Specificity, SR- Systemic Review

Author	Wang	Frey	Boschloo	Gan	Poon	Lin	Lee	Rybakowski	Kung	Ricci	Leao	Dodd
MDQ	X	X	X	X	X	X	X	X	X	X	X	X
CIDI		X										
BSDS							X					
HCL-32					X			X		X	X	
MINI						X						
Measurable Outcomes												
SN(%)	89	83	89	72	65	85	74	NR	86	61	68	73
SP(%)	84	82	84	73	77	87	84	NR	71	87	63	90
Optimal MDQ Score Cutoff												
≥7	X	X	X				X		X	X	X	X
<7				X	X (4+)	X (6)		X				

Ψ EVAL- Psychiatric Evaluation, AOI- Age of Onset of Illness, BP- Bipolar, BSDS- Bipolar Spectrum Diagnostic Scale, CIDI-Composite International Diagnostic Interview, FHX-Family History, GP- General Practice, HAM-Hamilton Rating Scale, HCL-32-Hypomania Checklist-32, IP- Inpatient, LOE- Level of Evidence, MA-Meta Analysis, MDQ- Mood Disorder Questionnaire, N- Number,NR- Not Reported, OP- Outpatient, S- Studies, SCID- Structured Clinical Interview for the DSM-IV, SN- Sensitivity, SP-Specificity, SR- Systemic Review

Appendix C



(Rogers, 2003)

Appendix D

THE MOOD DISORDER QUESTIONNAIRE

Instructions: Please answer each question to the best of your ability.

	YES	NO
1. Has there ever been a period of time when you were not your usual self and...		
...you felt so good or so hyper that other people thought you were not your normal self or you were so hyper that you got into trouble?	○	○
...you were so irritable that you shouted at people or started fights or arguments?	○	○
...you felt much more self-confident than usual?	○	○
...you got much less sleep than usual and found you didn't really miss it?	○	○
...you were much more talkative or spoke much faster than usual?	○	○
...thoughts raced through your head or you couldn't slow your mind down?	○	○
...you were so easily distracted by things around you that you had trouble concentrating or staying on track?	○	○
...you had much more energy than usual?	○	○
...you were much more active or did many more things than usual?	○	○
...you were much more social or outgoing than usual, for example, you telephoned friends in the middle of the night?	○	○
...you were much more interested in sex than usual?	○	○
...you did things that were unusual for you or that other people might have thought were excessive, foolish, or risky?	○	○
...spending money got you or your family into trouble?	○	○
2. If you checked YES to more than one of the above, have several of these ever happened during the same period of time?	○	○
3. How much of a problem did any of these cause you – like being unable to work; having family, money or legal troubles; getting into arguments or fights? *Please circle one response only.* No Problem Minor Problem Moderate Problem Serious Problem		
4. Have any of your blood relatives (i.e. children, siblings, parents, grandparents, aunts, uncles) had manic-depressive illness or bipolar disorder?	○	○
5. Has a health professional ever told you that you have manic-depressive illness or bipolar disorder?	○	○

Appendix E

Evidence-Based Practice Attitude Scale

EBPAS© Gregory A. Aarons, Ph.D.

Reference:

Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale. *Mental Health Services Research, 6*(2), 61-74.

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Manualized therapy refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

Fill in the circle indicating the extent to which you agree with each item using the following scale:

0 Not at All	1 To a Slight Extent	2 To a Moderate Extent	3 To a Great Extent	4 To a Very Great Extent

	0	1	2	3	4
1. I like to use new types of therapy/interventions to help my clients	O	O	O	O	O
2. I am willing to try new types of therapy/interventions even if I have to follow a treatment manual	O	O	O	O	O
3. I know better than academic researchers how to care for my clients	O	O	O	O	O
4. I am willing to use new and different types of therapy/interventions developed by researchers	O	O	O	O	O
5. Research based treatments/interventions are not clinically useful	O	O	O	O	O
6. Clinical experience is more important than using manualized therapy/treatment	O	O	O	O	O
7. I would not use manualized therapy/interventions	O	O	O	O	O
8. I would try a new therapy/intervention even if it were very different from what I am used to doing	O	O	O	O	O
For questions 9-15: If you received training in a therapy or intervention that was new to you, how likely would you be to adopt it if:					
9. it was intuitively appealing?	O	O	O	O	O
10. it "made sense" to you?	O	O	O	O	O
11. it was required by your supervisor?	O	O	O	O	O
12. it was required by your agency?	O	O	O	O	O
13. it was required by your state?	O	O	O	O	O
14. it was being used by colleagues who were happy with it?	O	O	O	O	O
15. you felt you had enough training to use it correctly?	O	O	O	O	O